

CLAIMS

The current claim set of the application is presented below. Indications as to the status of the claims ("original", "currently amended", "cancelled", "new", etc.) appear in parentheses after the claim number. Deletions are identified in bold with double brackets and strikethrough (e.g. ~~[[deletion]]~~) and new text is identified in bold with underlining (e.g. **new language**).

1. (Previously presented) A composition for forming an insulating layer, the composition comprising:

a mixture comprising surface modified inorganic nanoparticles present in an amount of 5 to 95 percent by weight of the mixture dispersed in polymethylsilsesquioxane present in an amount of 5 to 95 percent by weight of the mixture, wherein the surface modifier comprises a carboxylic acid, a carboxylic acid derivative, a silane, or mixtures thereof;

a solvent; and

one or more optional additives,

wherein the composition has a viscosity suitable for applying the composition using a digital printing technique.

2. (Original) The composition of claim 1, wherein the composition has a viscosity of 1 to 100,000 centipoise measured using continuous stress sweep, over shear rates of 1 s^{-1} to 1000 s^{-1} .

3. (Original) The composition of claim 1, wherein the composition has a viscosity suitable for ink jet printing.

4. (Original) The composition of claim 3, wherein the composition has a viscosity of 1 to 40 centipoise measured using continuous stress sweep, over shear rates of 1 s^{-1} to 1000 s^{-1} .

5. (Original) The composition of claim 1, wherein the nanoparticles comprise one or more of silica, zirconia, and alumina particles.

6. (Cancelled).

7. (Cancelled)

8. (Previously presented) The composition of claim 1, wherein the carboxylic acid derivatives comprise hexanoic acid or 2[-2-(2-methoxyethoxy)ethoxy]acetic acid.

9. (Previously presented) The composition of claim 1, wherein the silanes comprise methyltriethoxysilane, methyltrimethoxysilane, isobutyltriethoxysilane, isobutyltrimethoxysilane, isooctyltriethoxysilane, isooctyltrimethoxysilane, or mixtures thereof.

10. (Original) The composition of claim 1, wherein the nanoparticles have an average size of 1 to 500 nanometers.

11. (Original) The composition of claim 1, wherein the nanoparticles have an average size of 5 to 125 nanometers.

12. (Original) The composition of claim 1, wherein the one or more optional additives are present in an amount of 0 to 60 percent by weight of the composition after evaporation of substantially all the solvent.

13. (Original) The composition of claim 1, wherein the one or more optional additives comprise an adhesion promoter.

14. (Original) The composition of claim 13, wherein the adhesion promoter comprises polyethyloxazoline.

15. (Original) The composition of claim 13, wherein the adhesion promoter is present in an amount of 0 to 5 percent by weight of the composition after evaporation of substantially all the solvent.

16. (Previously presented) A composition for forming an insulating layer, the composition comprising:

a mixture comprising surface modified inorganic nanoparticles present in an amount of 5 to 95 percent by weight of the mixture dispersed in polymethylsilsesquioxane present in an amount of 5 to 95 percent by weight of the mixture;

a solvent; and

an additive comprising one or more tetraalkoxysilanes and alkyltrialkoxysilanes,

wherein the composition has a viscosity suitable for applying; the composition using a digital printing technique.

17. (Currently amended) The composition of claim 16, wherein the alkoxyisilanes are selected from the group consisting essentially of tetraethoxysilane, tetramethoxysilane, methyltriethoxysilane ~~[[methyltriethoxysilane]]~~, and methyltrimethoxysilane.

18. (Previously presented) The composition of claim 16, wherein the one or more tetraalkoxysilanes and alkyltrialkoxysilanes are present in an amount of 50 percent or less by weight of the composition after evaporation of substantially all the solvent.

19. (Original) The composition of claim 1, wherein the one or more optional additives comprise a flexibilizer.

20. (Previously presented) A composition for forming an insulating layer, the composition comprising:

a mixture comprising surface modified inorganic nanoparticles present in an amount of 5 to 95 percent by weight of the mixture dispersed in polymethylsilsesquioxane present in an amount of 5 to 95 percent by weight of the mixture;

a solvent; and

an additive comprising a flexibilizer comprising one or more of dialkyltrialkoxysilanes and trialkylmonoalkoxysilanes,

wherein the composition has a viscosity suitable for applying the composition using a digital printing technique.

21. (Previously presented) The composition of claim 20, wherein the one or more

dialkyldialkoxysilanes and trialkylmonoalkoxysilanes are selected from the group consisting of dimethyldiethoxysilane, dimethyldimethoxysilane, trimethylethoxysilane, and trimethylmethoxysilane.

22. (Original) The composition of claim 19, wherein the flexibilizer is present in an amount of 0 to 40 percent by weight of the composition after evaporation of substantially all the solvent.

23. (Previously presented) A composition for forming an insulating layer, the composition comprising:

a mixture comprising surface modified inorganic nanoparticles present in an amount of 5 to 95 percent by weight of the mixture dispersed in polymethylsilsesquioxane present in an amount of 5 to 95 percent by weight of the mixture;

a solvent; and

an additive comprising an organic acid,

wherein the composition has a viscosity suitable for applying the composition using a digital printing technique.

24. (Original) .The composition of claim 23, wherein the organic acid comprises acetic acid, methoxyethoxyacetic acid, hexanoic acid, or mixtures thereof.

25. (Previously presented) The composition of claim 23, wherein the organic acid is present in an amount of 3 percent or less by weight of the composition after evaporation of substantially all the solvent.

26. (Original) The composition of claim 1, wherein the solvent comprises an alcohol, a ketone, an ether, an acetate, or mixtures thereof.

27-59. (Cancelled).